Claim Amendments:

1 (currently amended): A method for modulating a binary bit stream in a composite video signal, the composite video signal includes luminance, chrominance and audio components, the method comprising:

obtaining sync pulse information from the composite video signal;

modulating the binary bit stream according to a modified orthogonal frequency division modulation (OFDM) technique, the modulating comprising:

generating in-phase and quadrature symbol frames from the binary bit stream; [[and]]

combining the in-phase and quadrature symbol frames streams according to OFDM modulation techniques; and

pre-equalizing the generated in-phase and quadrature symbol streams according to comb filtering effects;

converting the combined symbol frames into an analog signal; and

combining the analog signal with the composite video signal according to the obtained sync pulse information.

2 (currently amended): The method of claim 1, wherein combining the analog signal comprises:

translating the analog signal to be centered at an intermediate frequency above the baseband of the composite video signal and at a region of spectral minimum of the video signal; and

amplifying the translated analog signal.

3 (original): The method of claim 2, wherein the intermediate frequency is at least 2 MHz.

4 (currently amended): The method of claim 3, wherein the intermediate frequency is less than 3 MHz.

5 (currently amended): The method of claim 1, wherein modulating further comprises: encoding the binary bit stream with forward error correction code; ~~and preceding the generated in-phase and quadrature symbol streams according to comb filtering effects.~~

6 (canceled)

7 (currently amended): The method of claim 1, wherein the composite video signal is a NTSC video signal and wherein combining the analog signal with the composite video signal comprises time domain gating of the OFDM signal with the active part of the video horizontal line.

8 (currently amended): An apparatus for modulating a binary bit stream in a composite video signal, the composite video signal includes luminance, chrominance and audio components, the apparatus comprising:

a sync pulse stripper configured to obtain sync pulse information from the composite video signal;

a modulator configured to modulate the binary bit stream according to quadrature amplitude modulation, the modulator comprising:

a symbol mapper configured to generate in-phase and quadrature symbol streams; [[and]]

a symbol stream combiner configured to combine the in-phase and quadrature symbol streams according to quadrature amplitude modulation techniques; and

pre-equalizer operating on the generated in-phase and quadrature symbol streams to compensate for comb filtering effects

a digital to analog converter configured to convert the combined symbol streams into an analog signal; and

a combiner configured to combine the analog signal with the composite video signal according to the obtained sync pulse information.

9 (currently amended): The apparatus of claim 8, wherein the combiner to combine the analog signal comprises:

a translator configured to translate the analog signal to be centered at an intermediate frequency above the baseband of the composite video signal and at a region of spectral minimum of the video signal; and

an amplifier configured to amplifying the translated analog signal.

10 (original): The apparatus of claim 9, wherein the intermediate

frequency is at least 2 MHz.

11 (currently amended): The apparatus of claim 10, wherein the intermediate frequency is less than 3 MHz.

12 (canceled)

13 (currently amended): The apparatus of claim 8, wherein the ~~precoder~~ modulator comprises: a filter configured to filter the generated in-phase and quadrature symbol streams according to Nyquist square root filtering techniques.

14 (currently amended): The apparatus of claim 8, wherein the composite video signal is a NTSC video signal and wherein the combiner to combine the analog signal with the composite video signal comprises time domain gating of the OFDM signal with the active part of the video horizontal line.

15 (currently amended): A method for demodulating a binary bit stream modulated in a composite video signal as a gated and windowed orthogonal frequency division modulation (OFDM) offset carrier modulated signal, the composite video signal includes luminance, chrominance and audio components, the method comprising:

converting the composite video signal modulated with the carrier centered OFDM modulated signal into a digital signal;

splitting the digital signal into synch pulses and a quadrature amplitude modulated data stream;

gating the active video line interval and applying a window to the interval to help suppress the video signal components;

separating the offset OFDM modulated data stream into in-phase and quadrature symbol frames streams according to the synch pulses; and

combining the in-phase and quadrature demodulated symbol frames into a single binary data stream.

16 (original): The method of claim 15, wherein splitting comprises:

suppressing the composite video signal for attaining the offset OFDM modulated data stream;

suppressing the offset OFDM modulated data stream for attaining the composite video signal; and

extracting the synch pulses from the attained composite video signal.

17 (original): The method of claim 15, wherein separating comprises: frequency translating the offset OFDM modulated data frames to the baseband of the composite video signal.

18 (original): The method of claim 15, further comprising: decoding the single binary data stream according to forward error correction coding included in the binary data stream.

19 (original): The method of claim 15, wherein the composite video signal is a NTSC video signal.

20 (currently amended): A receiver for demodulating a binary bit stream modulated in a composite video signal as an offset orthogonal frequency division modulation (OFDM) modulated signal, the composite video signal includes luminance, chrominance and audio components, the receiver comprising:

an analog to digital converter configured to convert the composite video signal modulated with the offset OFDM modulated signal into a digital signal;

a gating and windowing unit operating on the digital signal;

a splitter configured to split the digital signal into synch pulses and an I-Q OFDM modulated data stream;

a separator configured to separate the offset OFDM modulated data frame into in -phase and quadrature symbol frames according to the synch pulses; and

a combiner configured to combine the in-phase and quadrature data frames into a single binary data stream.

21 (original): The receiver of claim 20, wherein the splitter comprises:

a first signal suppressor configured to suppress the composite video signal for attaining the I-Q OFDM modulated data stream;

a second signal suppressor configured to suppress the I-Q OFDM modulated data stream for attaining the composite video signal; and

an extractor configured to extract the synch pulses from the attained composite video signal.

22 (original): The receiver of claim 20, wherein the separator comprises: a translator configured to frequency translate the I-Q OFDM modulated data frame to the baseband of the composite video signal.

23 (original): The receiver of claim 20, further comprising: a decoder configured to decode the single binary data stream according to forward error correction coding included in the binary data stream.

24 (original): The receiver of claim 20, wherein the composite video signal is a NTSC video signal.